3. Cancelled.

4. (Amended) The method of claim 6, upon determining that the sum is greater than the long-term averaged energy and before determining the peak-to-mean likelihood ratio, the method further comprises:

determining whether a difference between the long-term averaged energy and the short-term averaged energy is less than a predetermined threshold;

determining that the current audio frame represents voice if the difference is greater than the predetermined threshold; and

continuing by determining the peak-to-mean likelihood ratio if the difference is less than the predetermined threshold.

5. (Amended) The method of claim 6, wherein the determining of the short-term averaged energy comprises:

determining an energy, in decibels, of the current audio frame;

determining a short-term averaged energy for a prior audio frame; and

conducting a weighted average of the energy of the current audio frame and the short-term averaged energy for the prior audio frame.

6. (Three Times Amended) A method for enhancing voice activity detection comprising:

determining a short-term averaged energy for a current audio frame;

determining a long-term averaged energy for the current audio frame;

determining whether a sum of the short-term averaged energy and a factor is greater than the long-term averaged energy;

determining that the current audio frame represents silence if the sum is less than the long-term averaged energy, without necessitating a determination of the peak-to-mean likelihood ratio;

determining a peak-to-mean likelihood ratio, the determining a peak-to-mean likelihood ratio comprises

calculating an averaged peak-to-mean ratio for the current audio frame,

determining a maximum averaged peak-to-mean ratio,

determining a minimum averaged peak-to-mean ratio,

determining a difference between the maximum averaged peak-to-mean ratio and the averaged peak-to-mean ratio for the current audio frame,

determining a difference between the maximum averaged peak-to-mean ratio and the minimum averaged peak-to-mean ratio, and

conducting a ratio, a denominator of the ratio being the difference between the maximum averaged peak-to-mean ratio and the minimum averaged peak-to-mean ratio, the numerator being the difference between the maximum averaged peak-to-mean ratio and the averaged peak-to-mean ratio; and

comparing the peak-to-mean likelihood ratio to a selected threshold to determine whether the current audio frame represents a voice signal.

7. Cancelled.

8. Cancelled.

9. (Amended) The communication module of claim 12, wherein the voice activity detector, when executed, controls the processing unit to determine whether a difference between the long-term averaged energy and the short-term averaged energy is less

E3

than a predetermined threshold, and to signal that the current audio frame represents voice if the difference is greater than the predetermined threshold.

10. Cancelled.

E4

11. (Amended) The communication module of claim 9, wherein the voice activity detector, when executed, controls the processing unit to determine a peak-to-mean ratio by (i) sampling an analog signal a predetermined number of times to produce a plurality of sampled signals each having a sampled value, (ii) determining a maximum value of the plurality of sampled signals, and (iii) conducting a ratio between an absolute value of the maximum value and a summation of the sampled values for the plurality of sampled signals.

E5

12. (Three Times Amended) A communication module comprising:

a substrate;

a processing unit placed on the substrate; and

a memory coupled to the processing unit, the memory to contain a voice activity detector which, when executed, controls the processing unit to

determine whether a sum of a short-term averaged energy and a predetermined factor is greater than a long-term averaged energy, and to signal that a current audio frame represents silence if the sum is less than the long-term averaged energy, and

if the current audio frame is not determined to be silence using the short-term averaged energy and the long-term averaged energy, determine a peak-to-mean likelihood ratio for the current audio frame by (i) monitoring a maximum averaged peak-to-mean ratio and a minimum averaged peak-to-mean ratio, (ii) determining a first result being a difference between the maximum averaged peak-to-mean ratio and the averaged peak-to-mean ratio for the current audio frame, (iii) determining a second result being a difference between the maximum averaged peak-to-mean ratio

and the minimum averaged peak-to-mean ratio, and (iv) conducting a ratio between the first result as a numerator and the second result as a denominator, and comparing the peak-to-mean likelihood ratio to a selected threshold to determine whether the current audio frame represents a voice signal.

13. Cancelled.

14. Cancelled.

15. (Amended) A machine readable medium having embodied thereon a computer program for processing by a machine, the computer program comprising:

a first routine for determining a normalized peak-to-mean likelihood ratio including (i) a denominator having a value substantially equal to a difference between a maximum averaged peak-to-mean ratio and a minimum averaged peak-to-mean ratio and (ii) a numerator having a value substantially equal to a difference between the maximum averaged peak-to-mean ratio and the averaged peak-to-mean ratio;

a second routine for comparing the peak-to-mean likelihood ratio to a selected threshold to determine whether a current audio frame being transmitted represents a voice signal;

a third routine for determining a short-term averaged energy for successive audio frames including the current audio frame, the third routine being executed before the first and second routines;

a fourth routine for determining a long-term averaged energy for the current audio frame, the fourth routine being executed before the first and second routines;

a fifth routine for determining whether a sum of the short-term averaged energy and a predetermined factor is greater than the long-term averaged energy, the fifth routine being executed before the first and second routines; and

a sixth routine for determining whether a difference between the long-term averaged energy and the short-term averaged energy is less than a predetermined threshold, the sixth routine being executed after determining that the sum is greater than the long-term averaged energy and before execution of the first and second routines.

16. The machine readable medium of claim 15, wherein the fifth routine determining that the current audio frame represents silence if the sum is less than the long-term averaged energy.

17. The machine readable medium of claim 15, wherein the sixth routine determining that the current audio frame represents voice if the difference is greater than the predetermined threshold.

18. Cancelled.

19. Cancelled.

20. Cancelled.

21. Cancelled.

22. (Amended) A method for enhancing voice activity detection comprising:

determining a short-term averaged energy for a current audio frame;

determining a long-term averaged energy for the current audio frame;

determining whether a sum of the short-term averaged energy and a factor is greater than the long-term averaged energy;

determining that the current audio frame represents silence if the sum is less than the long-term averaged energy, without necessitating a determination of the peak-to-mean likelihood ratio;

determining a peak-to-mean likelihood ratio including (i) a denominator having a value substantially equal to a difference between a maximum averaged peak-to-mean ratio and a minimum averaged peak-to-mean ratio and (ii) a numerator having a value substantially equal to a difference between the maximum averaged peak-to-mean ratio and the averaged peak-to-mean ratio; and

comparing the peak-to-mean likelihood ratio to a selected threshold to determine whether a current audio frame represents a voice signal.

23. The method of claim 22, upon determining that the sum is greater than the long-term averaged energy and before determining the peak-to-mean likelihood ratio, the method further comprises:

determining whether a difference between the long-term averaged energy and the short-term averaged energy is less than a predetermined threshold;

determining that the current audio frame represents voice if the difference is greater than the predetermined threshold; and

continuing by determining the peak-to-mean likelihood ratio if the difference is less than the predetermined threshold.

24. (Amended) The method of claim 22, wherein the determining of the short-term averaged energy comprises:

determining an energy, in decibels, of the current audio frame;

determining a short-term averaged energy for a prior audio frame; and

conducting a weighted average of the energy of the current audio frame and the short-term averaged energy for the prior audio frame.

25. (New) The method of claim 6, wherein the short-term averaged energy is an accumulation of signal energy associated with successive audio frames including the current audio frame.

26. (New) The method of claim 25, wherein the successive audio frames are pulse code modulation (PCM) audio frames.

27. (New) The method of claim 25, wherein the long-term averaged energy is based on the accumulation of the signal energy and a background noise level.

28. (New) The method of claim 6, wherein the short-term averaged energy is based on a current frame entry and a prior short-term averaged energy value.

29. (New) The method of claim 6, wherein the factor is at least two decibels.

30. (New) The communication module of claim 12, wherein the short-term averaged energy determined by the voice activity detector is an accumulation of signal energy associated with the successive audio frames being pulse code modulation (PCM) audio frames.

31. (New) The communication module of claim 30, wherein the long-term averaged energy determined by the voice activity detector is based on the accumulation of the signal energy and a background noise level.

32. (New) The communication module of claim 12, wherein the predetermined factor is at least two decibels.

33. (New) The software readable medium of claim 15, wherein the short-term averaged energy determined by the third routine is an accumulation of signal energy associated with the successive audio frames.

34. (New) The software readable medium of claim 33, wherein the long-term averaged energy determined by the fourth routine is based on the accumulation of the signal energy and a background noise level.

35. (New) The method of claim 22, wherein the short-term averaged energy is an accumulation of signal energy associated with successive audio frames including the current audio frame.

36. (New) The method of claim 22, wherein the short-term averaged energy is based on the current audio frame and a prior short-term averaged energy value.

37. (New) The method of claim 22, wherein the factor is at least two decibels.